

REMARKS

The Office Action rejects claim 35 under 35 U.S.C. § 112, first paragraph. The Office Action also rejects claims 19, 21-25, 28-31, and 33-35 under 35 U.S.C. § 112, second paragraph. Additionally, the Office Action rejects claims 30, 33, and 35 under 35 U.S.C. § 102(b) as being anticipated by Sasaki et al. (U.S. Patent No. 4,985,100) or JP 3-114737 (hereafter "JP '737"). The Office Action also rejects claims 19, 21-23, 28-31, 33, and 35 under U.S.C. § 103(a) as being obvious over various combinations of Okada et al. (Published U.S. Patent Application No. 2001/0002608), Sasaki, JP '737, and Miyamoto et al. (U.S. 5,399,225). Additionally, the Office Action rejects claims 24, 25, and 34 under 35 U.S.C. § 103(a) as being unpatentable over various combinations of Sasaki, JP '737, Okada, Miyamoto, and Caretta et al. (Published U.S. Patent Application No. 2001/0042586).

Regarding the rejection of claim 35 under 35 U.S.C. § 112, Applicant has cancelled claim 35.

Regarding the rejection of claims 19, 21-25, 28-31, and 33-35 under 35 U.S.C. § 112, second paragraph, Applicant has amended claims 19 and 30 with the suggestions of the Office Action for overcoming this rejection. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 19, 21-25, 28-31, and 33-35 under 35 U.S.C. § 112, second paragraph.

By this Reply, Applicant has also amended claim 19 to recite "disposing a carcass structure on a primary drum by assembling component parts of the carcass structure on the primary drum." Similarly, Applicant has amended claim 30 to recite "wherein the apparatus is configured to dispose the carcass structure on the primary

drum by assembling component parts of the carcass structure on the primary drum.”

The originally filed application fully supports the amendments to claims 19 and 30.

Additionally, Applicant has added new claims 37-55. New claims 37-55 relate to an approach for meeting the tread band production requirements of a tire plant by using the disclosed methods and equipment for constructing spirally wound tread bands for some of the tires, in combination with using conventional extrusion and end-to-end joining of semi-finished tread band strips for others of the tires. This approach of supplementing conventional tread band production with spirally wound tread bands provides an efficient, cost-effective, flexible way to meet varying requirements for tread band production, as discussed in the following excerpts of the application:

Consequently, tyre-building plants currently in use and comprising a plurality of assembling apparatus interlocked with the same tread band extrusion line can be advantageously adapted to the increases in productivity requested by the market, by merely adding one or more apparatus according to the invention, so as to obtain an increase in productivity meeting the market requirements.

P. 16, ll. 3-32.

In addition, further advantages from a qualitative point of view have repercussions on traditional extrusion lines when the apparatus in reference is used in combination with other apparatus interlocked with an extrusion line of known type. For example, combination of the concerned apparatus with a known plant provided with one or more traditional extrusion lines makes it possible to reduce productivity of the extrusion lines when it is necessary to carry out working of particular blends and materials that, due to process requirements, cannot be extruded at high speed, without on the other hand impairing the overall productivity of the plant.

P. 17, ll. 3-19. In addition to the above excerpts, support for the portions of the new claims 37-55 related to conventional tread-band-production and the

combination of such technology with spirally wound tread-band-production

appears at least at p. 3, l. 27-p. 4, l. 2, p. 5, ll. 4-33, and p. 16, ll. 3-15..

Applicant believes that the originally filed application fully supports new claims

37-55. In addition to the above-listed amendments, Applicant has cancelled

claim 28. Claims 19, 21-25, 29-31,33, 34, and 37-55 are currently pending.

Regarding the rejection of claims 30, 33, and 35 under 35 U.S.C. § 102(b),
Applicant respectfully submits that Sasaki and JP '737 cannot anticipate these claims.

In order to anticipate a claim, a reference must teach every feature of the claim.

M.P.E.P. § 2131. In an apparatus according to any of claims 30, 33, and 35, "the apparatus is configured to dispose the carcass structure on the primary drum by assembling component parts of the carcass structure on the primary drum." Applicant respectfully submits that neither Sasaki nor JP '737 teaches or suggests these claimed features.

Sasaki discloses a tire building apparatus with building drums 3a and 3b, a belt-tread assembly transfer device 9, and a tire building apparatus 8. Col. 3, ll. 10-17 and 32-35; and col. 4, ll. 14-17. Similarly, JP '737 discloses a system with two belt molding drums 4a, 4b, a transporting device 8, and a shaping drum 1. Abstract. However, neither Sasaki nor JP '737 teaches or suggests that "the apparatus is configured to dispose the carcass structure on the primary drum by assembling component parts of the carcass structure on the primary drum." Thus, Applicant respectfully submits that neither Sasaki nor JP '737 can anticipate claims 30, 33, and 35. Accordingly, Applicant respectfully requests withdrawal of the rejection of these claims under 35 U.S.C. § 102(b).

Regarding the rejection of claims 19, 21-23, 28-31, 33, and 35 under 35 U.S.C. § 103(a) as being unpatentable over various combinations of Okada, Sasaki, JP '737, and Miyamoto, Applicant respectfully submits that the Office Action has not established a *prima facie* case of obviousness. A proper obviousness rejection must address every claim feature. See M.P.E.P. § 2143.03. A method according to any of claims 19, 21-23, 28, and 29 includes, *inter alia*, “disposing a carcass structure on a primary drum by assembling component parts of the carcass structure on the primary drum” (emphasis added). In an apparatus according to any of claims 30, 33, and 35, “the apparatus is configured to dispose the carcass structure on the primary drum by assembling component parts of the carcass structure on the primary drum.” As discussed above, Sasaki and JP '737 fail to teach or suggest these claimed features, and Applicant respectfully submits that Okada and Miyamoto fail to cure this deficiency.

Okada discloses transferring a band member 140 and a belt/tread member 150 to a shaping forming machine 20 with a band transfer 40 and a belt transfer 50, respectively. ¶ 64, ll. 7-10; ¶ 67, ll. 3-8. Subsequently, Okada's system integrates the band member 140 with the belt/tread member 150 by manipulating shaping drums 24 of the shaping forming machine 20 to expand the diameter of the band member 140. ¶ 68, ll. 5-11. However, Okada does not teach or suggest “disposing a carcass structure on a primary drum by assembling component parts of the carcass structure on the primary drum” or that “the apparatus is configured to dispose the carcass structure on the primary drum by assembling component parts of the carcass structure on the primary drum.” Rather, Okada teaches assembling the band member 140 on a band drum 14, including wrapping the liner 65 and the carcass 756 of the tire around the band drum

14, before the band transfer 40 moves the band member 140 from the band drum 14 to the shaping forming machine 20. ¶¶ 60-64.

Miyamoto discloses a tire-building apparatus with a band drum 1 and a shaping drum 2. Col. 4, ll. 37-42. Miyamoto discloses bonding a belt and tread assembly to a carcass on the shaping drum. Col. 6, ll. 56-59. However, Miyamoto does not teach or suggest “disposing a carcass structure on a primary drum by assembling component parts of the carcass structure on the primary drum” or that “the apparatus is configured to dispose the carcass structure on the primary drum by assembling component parts of the carcass structure on the primary drum.” Rather, Miyamoto suggests that tire-building apparatuses assemble the tire’s carcass on the band drum 1. Col. 1, ll. 30-35.

For at least the foregoing reasons, Applicant respectfully submits that Sasaki, JP ‘737, Okada, and Miyamoto cannot support a *prima facie* case of obviousness of claims 19, 21-23, 28-31, 33, and 35. Accordingly, Applicant respectfully requests withdrawal of the rejections of claims 19, 21-23, 28-31, 33, and 35 under 35 U.S.C. § 103(a) as being unpatentable over various combinations of Okada, Sasaki, JP ‘737, and Miyamoto.

Regarding the rejection of claims 24, 25, and 34 under 35 U.S.C. § 103(a) as being unpatentable over various combinations of Sasaki, JP ‘737, Okada, Miyamoto, and Caretta, Applicant respectfully submits that the Office Action does not establish a *prima facie* case of obviousness. A method according to any of claims 19, 21-23, 28, and 29 includes, *inter alia*, “disposing a carcass structure on a primary drum by assembling component parts of the carcass structure on the primary drum” (emphasis added). In an apparatus according to any of claims 30, 33, and 35, “the apparatus is configured to dispose the carcass structure on the primary drum by assembling

component parts of the carcass structure on the primary drum.” As discussed above, Sasaki, JP ‘737, Okada, and Miyamoto fail to teach or suggest these claimed features.

Regarding Caretta, Applicant respectfully submits that Caretta teaches away from the invention of claims 24, 25, and 34. A reference that teaches away from a claimed combination generally cannot support a *prima facie* case of obviousness of that claimed combination. McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1354 (Fed. Cir. 2001), citing In re Gurley, 27 F.3d 551, 553 (Fed. Cir. 1994). A reference teaches away from a claimed invention if reading the reference would discourage a person of ordinary skill in the art from implementing the claimed invention. Tec Air, Inc. v. Denso Mfg. Michigan Inc., 192 F.3d 1353, 1360 (Fed. Cir. 1999), citing In re Gurley, 27 F.3d 551, 553 (Fed. Cir. 1994).

A method according to either of claims 24 and 25 includes executing some tire-construction on a primary drum and some tire construction on an auxiliary drum, and an apparatus according to claim 34 includes a primary drum for some aspects of tire construction and an auxiliary drum for other aspects of tire construction. By contrast, the tire-construction system disclosed in Caretta involves manufacturing all components of a tire directly on a single toroidal support. ¶ 71 Caretta suggests that tire-construction processes involving use of semi-finished products, like the processes disclosed Sasaki, JP ‘737, and Okada, have disadvantages that Caretta desired to avoid. ¶¶ 8-9. Thus, Applicant respectfully submits that Caretta would discourage a person of ordinary skill in the art from implementing a process using a primary drum and an auxiliary drum for different aspects of tire-construction.

For at least the foregoing reasons, Applicant respectfully submits that Sasaki, JP '737, Okada, Miyamoto, and Caretta cannot support a *prima facie* case of obviousness of claims 24, 25, and 34. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 24, 25, and 34 under 35 U.S.C. § 103(a) as being unpatentable over various combinations of Sasaki, JP '737, Okada, Miyamoto, and Caretta.

NEW CLAIMS 37-55

As discussed above, new claims 37-55 relate to an approach for constructing “a plurality of tread bands” for tires by using a first process to produce “at least one first tread band” with a “semi-finished tread band strip section” “end-to-end joined on a first belt structure,” while using “an assembling apparatus to assist the first process in constructing the plurality of tread bands,” including “applying a spirally wound tread band onto [a] second belt structure.” As discussed in the Application, this approach of using both of these types of tread-production in combination provides a cost-effective, efficient, flexible way to produce a plurality of tread bands for tires in a manner tailored to current demands. See Application at p. 5, ll. 4-33; p. 16, ll. 17-24; and p. 17, ll. 3-19. Sasaki, JP '737, Okada, Miyamoto, and Caretta fail, both alone and combination, to disclose at least these features of new claims 37-55. Accordingly, Applicant respectfully submits that new claims 37-55 are allowable over the cited references.

Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration of this application and the timely allowance of the pending claims.

The Office Action contains characterizations of the claims and the related art with which Applicant does not necessarily agree. Unless expressly noted otherwise, Applicant declines to subscribe to any statement or characterization in the Office Action.

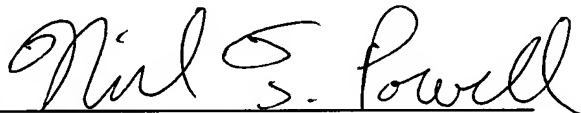
Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account no. 06-0916.

If the Examiner believes a telephone conversation might advance prosecution, the Examiner is invited to call Applicants' undersigned agent at 202-408-4492.

Respectfully submitted,

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